

Title (en)
HEAT INSULATING MATERIAL, ENGINE COMPRISING HEAT INSULATING MATERIAL, NANOPARTICLE DISPERSION LIQUID, AND PRODUCTION METHOD FOR HEAT INSULATING MATERIAL

Title (de)
WÄRMEISOLIERENDES MATERIAL, MOTOR MIT WÄRMEISOLIERENDEM MATERIAL, NANOPARTIKELDISPERSIONSFLÜSSIGKEIT UND VERFAHREN ZUR HERSTELLUNG EINES WÄRMEISOLIERENDEN MATERIALS

Title (fr)
MATÉRIAU D'ISOLATION THERMIQUE, MOTEUR COMPRENANT UN MATÉRIAU D'ISOLATION THERMIQUE, LIQUIDE DE DISPERSION DE NANOPARTICULES, ET PROCÉDÉ DE PRODUCTION DE MATÉRIAU D'ISOLATION THERMIQUE

Publication
EP 3943449 A4 20220525 (EN)

Application
EP 20791358 A 20200415

Priority
• JP 2019076798 A 20190415
• JP 2020016552 W 20200415

Abstract (en)
[origin: EP3943449A1] A heat insulating layer 11 contains many hollow particles 12, a silicone-based resin binder 13, and silica nanoparticle 14. The percentage of the silica nanoparticles 14 in the total amount of the resin binder 13 and the silica nanoparticles 14 is equal to or greater than 10% by volume and equal to or smaller than 55% by volume.

IPC 8 full level
C01B 33/18 (2006.01); **C08K 3/36** (2006.01); **C08K 7/24** (2006.01); **C09D 5/00** (2006.01); **C09D 7/20** (2018.01); **C09D 7/40** (2018.01); **C09D 7/61** (2018.01); **C09D 7/62** (2018.01); **C09D 183/04** (2006.01); **F02F 3/14** (2006.01); **F16L 59/02** (2006.01)

CPC (source: EP US)
C01B 33/18 (2013.01 - US); **C09D 7/62** (2017.12 - EP US); **C09D 7/69** (2017.12 - EP); **C09D 7/70** (2017.12 - EP US); **C09D 183/04** (2013.01 - US); **C01B 33/18** (2013.01 - EP); **C01P 2004/64** (2013.01 - US); **C01P 2006/32** (2013.01 - US); **C08K 3/36** (2013.01 - EP); **C08K 7/24** (2013.01 - EP); **C09D 5/00** (2013.01 - EP); **F02F 3/14** (2013.01 - EP); **F05C 2251/048** (2013.01 - EP); **Y10T 428/31663** (2015.04 - US)

Citation (search report)
• [Y] CN 109467095 A 20190315 - UNIV ZHEJIANG TECHNOLOGY
• [XD] JP 6390643 B2 20180919
• [A] US 2013327289 A1 20131212 - HIRATSUKA ICHIRO [JP], et al
• [XY] WU CHEN ET AL: "SiO₂ nanoparticles enhanced silicone resin as the matrix for Fe soft magnetic composites with improved magnetic, mechanical and thermal properties", JOURNAL OF ALLOYS AND COMPOUNDS, vol. 741, 1 April 2018 (2018-04-01), CH, pages 35 - 43, XP055911877, ISSN: 0925-8388, DOI: 10.1016/j.jallcom.2017.12.322
• See references of WO 2020213637A1

Designated contracting state (EPC)
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Designated extension state (EPC)
BA ME

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DOCDB simple family (application)
EP 20791358 A 20200415; CN 202080028456 A 20200415; JP 2020016552 W 20200415; JP 2021514193 A 20200415; US 202017594379 A 20200415